USDI, Bureau of Land Management
Three Rivers Resource Area, Burns District
Hines, Oregon 97738

# Finding of No Significant Impact
# and
# Decision Record
# for
# Lake Creek/Boone Canyon Forest Restoration
# Environmental Assessment

OR-025-04-018-1

## INTRODUCTION:

The Lake Creek/Boone Canyon Forest Restoration project area is located in Harney County on the west side of the Silvies River, north to Lake Creek and south to Boone Canyon (T. 21 S., R. 29 E., Sections 14, 15, 22 to 27, elevation range 4,300 to 5,200 feet). Lake Creek and Boone Canyon lie approximately 15 and 13 miles northwest of Burns, respectively.

The project area consists of several dominant plant communities proposed for treatment including: low and stiff sagebrush/bunchgrasses, mountain big sagebrush/bunchgrasses, ponderosa pine/bunchgrasses, and Douglas-fir/bluegrass. Other important plant communities occurring in the project area proposed for treatment include quaking aspen, mountain mahogany, and bitterbrush. Douglas-fir, ponderosa pine, and western juniper have encroached upon important plant communities and are out of balance with historical compositions. In this document western juniper will be addressed separately from all other conifers.

The forested areas within the project area are overstocked[1], which has resulted in a reduction of grasses, forbs, and shrubs. Douglas-fir stands are overstocked and have established in large numbers in historic ponderosa pine stands. Ponderosa pine stands that are not being encroached upon by Douglas-fir or juniper have become overstocked with small diameter and reproduction trees. These overstocked stands are susceptible to mountain pine beetle and western pine beetle infestations as well as diseases. Heavily overstocked and diseased stands are vulnerable to major crown fires[2] that can threaten human life and property, as well as cause extreme forms of resource damage.

The density, patch size, and health and vigor of mountain big sagebrush/bunchgrasses, low and stiff sagebrush flats, quaking aspen, mountain mahogany, and bitterbrush stands are declining as a result of encroaching juniper and pine trees. Much of the existing mountain big sagebrush/bunchgrass communities are in an early transitional phase to a closed western juniper woodland. Juniper has also encroached into, and in many cases dominates, quaking aspen, mountain mahogany, and bitterbrush stands. Ponderosa pine and Douglas-fir have also encroached upon these plant communities.

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[1] *Overstocked:* Having a tree density in excess of the range of historic variability.
[2] *Crown fire*: A fire that advances by moving among the crowns or canopies of trees and shrubs.

These are fire-dependent plant communities, which are generally well beyond their historical fire frequencies. The project area has high wildlife values due to the habitat diversity created by the juxtaposition of the different plant communities. The proposal is to implement forest and rangeland management activities to preserve, enhance, and lessen the effect of wildfire on these plant communities.

SUMMARY OF PROPOSED ACTION:

The proposal is a combination of conifer (ponderosa pine and Douglas-fir) thinning, removal of juniper, aspen treatments, and prescribed fire. The proposal is an effort to reduce fuels, increase human safety, reduce the risk of fire entering adjacent private land, and protect and enhance areas of high resource value. The project area is divided up into four vegetative communities: low/stiff sagebrush flats, mountain big sagebrush/bunchgrasses currently being dominated by western juniper and ponderosa pine, forested areas (ponderosa pine and Douglas-fir/bluegrass), and aspen stands. The fence along the lower section of Lake Creek would be fixed and/or replaced where needed, and approximately three-quarter mile of new fence and gap fence would be constructed to exclude livestock from the lower section of Lake Creek. Gap fencing along the west side of the Silvies River rim would be constructed as needed.

Low/Stiff Sagebrush Flats

These plant communities have had juniper encroach upon them. The objective in these areas is to improve sage-grouse habitat and protect the integrity of the low/stiff sagebrush flats. The proposed action in these units is to remove the juniper. All juniper trees except those showing old growth characteristics[3] or obvious wildlife occupation (cavities or bird nest) would be cut, lopped, and left. The work in these plant communities would be accomplished using Bureau of Land Management (BLM) fire and fuels personnel.

Mountain Big Sagebrush/Bunchgrass Communities

There are approximately 800 acres of mountain big sagebrush/bunchgrass communities being encroached upon, and in some cases, dominated by juniper and pine that are proposed for treatment. Other important plant communities occurring within these sites include mountain mahogany and bitterbrush stands. Juniper and pine have encroached upon all vegetative communities in these areas. The objective in these areas is to restore and enhance existing mountain big sagebrush/bunchgrass, mountain mahogany, and bitterbrush sites. The proposal in all of these plant communities is to remove the encroached juniper and pine trees. Approximately 70 to 90 percent or 560 acres to 720 acres of the units would be treated. The proposal is to cut and pile encroached juniper and pine trees. All juniper trees except those showing old growth characteristics or obvious wildlife occupation would be cut and piled. Understory thinning, ranging from complete removal to a 22-foot spacing within the understory, and piling would occur on the pine trees in these units. Some medium size pine trees (10 to 26-inch Diameter Breast Height (DBH)) would also be cut in these units in an effort to return the pine component in these communities back to a historic level. Some of these trees would be girdled and left for snag habitat. Others may be hauled off site by way of stewardship contracts.

[3] *Old growth characteristics:* trees with an irregular canopy, lichen on the branches, and/or deeply furrowed bark.

This would involve temporarily improving and creating new roads within these units. The temporary new roads would be closed and rehabilitated after implementation. The largest pine trees in these units would be left. All juniper and pine slash would be piled unless piling is determined to be detrimental to retained vegetation (for example, in areas of dense mountain mahogany or bitterbrush). In those areas where it is determined to be detrimental to retain vegetation, slash would either be left, lopped or hand piled. These areas would be identified during onsite project layout. Where piling does occur, the construction of piles would move slash away from mountain mahogany and bitterbrush vegetation as much as practical. Piling would be done by some kind of mechanized equipment other than a dozer (excavator, feller buncher, etc.). All piles would be burned after the vegetation cured. Orchardgrass, and/or ladak alfalfa, and/or cereal rye may be planted where pile burning occurs to take grazing pressure off desired browse and grasses and to reduce potential noxious weed invasion of disturbed sites. The thinning, removal of juniper, and piling work in these units would be accomplished through either service or stewardship contracts. The burning of the piles would be accomplished using BLM fire and fuels personnel.

Forested Areas

There are approximately 1,600 acres in the project area dominated by ponderosa pine/bunchgrasses and Douglas-fir/bluegrass communities. Other plant communities occurring within these sites include mountain big sagebrush/bunchgrass, aspen, mountain mahogany, and juniper. These units represent overstocked forested areas. The objective in these areas is to improve forest health, reduce fuel loading and the risk of stand replacement fires, and improve wildlife habitat. The proposal is to thin the understory of overstocked pine and Douglas-fir stands and remove encroaching juniper. Several untreated islands would be left to provide quality thermal and hiding cover for wildlife. These islands would be determined during onsite project layout. Approximately 70 to 90 percent or 1,125 to 1,445 acres of the area within the units would be treated mechanically. All junipers except those displaying old growth characteristics or obvious wildlife occupation would be cut and piled. Understory pine and Douglas-fir trees would be thinned using a variable tree spacing (basal areas ranging from 50 to 150 feet$^2$/acre). All juniper, pine, and Douglas-fir slash would be piled either by hand or machine depending on feasibility and resource concerns. All piles would be burned after the vegetation cured. Orchardgrass, and/or ladak alfalfa, and/or cereal rye may be planted where pile burning occurs to take grazing pressure off desired browse and grasses. A prescribed underburn on all forested units (units outlined with green on Maps 2 and 3) would be completed 5 to 7 years after mechanical treatment. Raking of deep duff around old growth Douglas-fir and pine trees, large snags, and large down woody debris may be done prior to burning if needed. All thinning and piling work in these units would be accomplished through either service or stewardship contracts. Pile burning and prescribed underburning[4] would be accomplished using BLM fire and fuels personnel. In Unit 3 thinned conifers may be hauled off site by way of stewardship contracts. Only existing roads would be used to accomplish this.

[4] *Underburning or understory burning:* Prescribed burning with a low fireline intensity fire under a timber canopy.

Aspen

There are several aspen stands found within the forested areas. All aspen stands that exist within the project area are being encroached upon by juniper, pine, and Douglas-fir. The proposal in these treatment areas is to remove the encroaching vegetation. Douglas-fir and pine trees less than 10 inches DBH would be cut, limbed, and piled. Pine and Douglas-fir trees in the 11 to 19-inch DBH size range would be cut and limbed. Only the limbs would be piled on these trees, leaving the bole to serve as down woody debris. Pine and Douglas-fir trees in the 20 to 26-inch DBH size range would either be girdled to provide snag habitat or left alone. This would be determined by affected resources. The few pine and fir trees larger than 26 inches DBH would be left alone. If it is determined to be both economically and environmentally feasible, cut conifers could be sold and removed. All junipers except those showing old growth characteristics or obvious wildlife occupation would be cut, limbed, and piled. All piling in aspens stands would be done by hand. Piles would be burned after the cut vegetation has cured. Orchardgrass, and/or ladak alfalfa, and/or cereal rye may be planted where pile burning occurs to take grazing pressure off suckers and other desired browse and grasses. Aspen stands could be fenced to protect aspen suckers from browsing animals. This would be determined through monitoring. If a fence is determined to be needed, it would be removed after new suckers obtain a height where the apical bud is 7 feet or higher.

Project Design Features

- Archaeology, botanical, and wildlife clearances would be done prior to any implementation of the proposed action. Where archaeological sites or Special Status flora or fauna are found appropriate measures would be taken.

- Protect cultural resource values throughout the life of the project. Archaeological sites would be avoided within the mechanical treatment units and activity generated fuels would not be piled within the boundaries of sites. Sites with combustible constituents would be protected during the deployment of prescribed fire by black-lining resources and use of appropriate ignition techniques. The District Fire Archaeologist would review burn plans prior to project implementation.

- Protect Special Status vegetation species throughout the life of the project. Special Status plant populations would be avoided within mechanical treatment units if necessary. Fire intolerant sensitive plants would be protected during deployment of prescribed fire by black-lining resources and use of appropriate ignition techniques. The District Fire Botanist would review burn plans prior to project implementation.

- Protect Special Status wildlife species and their habitat throughout the life of the project. Structures or areas with Special Status species habitat value identified during wildlife surveys would be protected during project implementation. The District Fire Wildlife Biologist would review burn plans prior to project implementation.

- Maintain suitable big game hiding and thermal cover within mechanical fuels reduction and mountain mahogany enhancement treatment units.

- Avoid mechanical cutting of juniper, ponderosa pine, or Douglas-fir with old growth characteristics or obvious wildlife occupation (cavities or nests).

- Existing snags and large down woody debris would be retained to the extent practical. Snags and downed woody debris would be created if necessary in the mechanical treatment units. A minimum of one snag per acre would remain in the mechanical units following treatment. Snags would be created by girdling medium to large diameter ponderosa pine or Douglas-fir trees. Large downed wood may be protected by foaming, blacklining or constructing handline around specific areas.

- The risk of noxious weed introduction would be minimized by ensuring all equipment (including all machinery, 4-wheelers, and pickup trucks) is cleaned prior to entry to the site, minimizing disturbance activities, and completing follow-up monitoring, for at least 3 years, to ensure no new noxious weed establishment. Should noxious weeds be found, appropriate control treatments would be performed.

- Piles would be burned when soil moistures are high or under frozen soil conditions to reduce the threat of escape.

C. No Action Alternative

Under this alternative no treatments described in the proposed action would be implemented. Management under the no action alternative would continue under the current Three Rivers Resource Management Plan (RMP) and all other relevant policy direction.

FINDING OF NO SIGNIFICANT IMPACT:

This proposal is in conformance with objectives and land use plan allocations in the 1992 Three Rivers RMP. Based on the analysis of potential environmental impacts contained in the Environmental Assessment (EA) and all other information, I have determined that the proposed action and alternatives analyzed do not constitute a major Federal action that would significantly impact the quality of the human environment. Therefore, an Environmental Impact Statement (EIS) is not necessary and will not be prepared.

Rationale:

This determination is based on the following: The following critical elements of the human environment have been analyzed in the Three Rivers RMP/Final EIS, and are not known to be present in the project area or affected by enacting either alternative: Wilderness, Wilderness Study Areas, Areas of Critical Environmental Concern, Wild and Scenic Rivers, American Indian Religious Concerns, Paleontology, Floodplains, Prime or Unique Farmlands, and Hazardous Materials. The following two critical elements are not discussed in the Three Rivers RMP/FEIS, but are either not known to be present in the project area or affected by enacting either alternative: Adverse Energy Impacts and Environmental Justice. All potentially impacted resources were analyzed in the EA specific to the proposed action. The following resources were analyzed in the EA: air quality, water quality, migratory birds, wetlands and riparian, Special Status flora, Special Status fauna, noxious weeds, cultural heritage, soils, vegetation, wildlife, fisheries, rangeland management, recreation, visual resources, socioeconomics, forestry, fire management, and realty. Impacts to these resources are considered nonsignificant (based on the definition of significance in 40 CFR 1508.27) for the following reasons:

Air Quality:

The air quality currently meets or exceeds air quality standards outlined by the Oregon Department of Environmental Quality (DEQ). The proposed action would have only minor and short-term impacts on air quality while the project was being implemented.

Water Quality:

The project area includes Lake Creek and Boone Canyon. It also borders the west side of the Silvies River. No formal water quality monitoring has occurred along Lake Creek or Boone Canyon. The Silvies River is not on the DEQ 303(d) list for water temperature, however, four tributaries on that list flow into the Silvies River upstream of the Silvies Canyon Allotment. Therefore, it is possible that the Silvies River is also limited by high water temperatures. Under the proposed action current water quality conditions would be maintained. There may be an increase in sediment input into the streams in the short term. However, this would be minimal due to topography, soils, and project design. The removal of shade providing vegetation could cause an increase to water temperatures. However, this is expected to be a short-term impact as the removal of the encroaching conifers and juniper should facilitate the reestablishment of a riparian hardwood community.

Wetlands and Riparian:

Lake Creek and the west side of the Silvies River have the only riparian zones in the proposed project areas. Under the proposed action current riparian conditions would be maintained and enhanced. The proposed action would reduce the chances of a stand replacement fire thus limiting the threat of fire damage to the riparian vegetation. The proposed action would also facilitate the recovery of riparian hardwood communities to a more historic level.

Migratory Birds:

Direct impacts to migratory birds would be minimized through project design features. Snag and decadent wood availability would increase. In the long term as the trees get larger, migratory birds such as cavity nesters that prefer large trees would have improved habitat quality. Species which utilize deciduous habitat would benefit with the regeneration of aspen and other riparian vegetation. There would be a reduction in habitat quality for birds that prefer dense understories and those that forage and nest in the small age class conifer trees. The overall net effect of the proposed action would likely be an increase in habitat diversity and an increase in avian species diversity.

Threatened, Endangered, and Special Status Species – Flora

There are no known Federally listed Threatened or Endangered plant species found within or adjacent to the project area. Botanical clearances have been completed and one Special Status plant species (dwarf lousewort) was found within the project area. Dwarf lousewort, is a Bureau Tracking species, but was recently dropped off the Oregon Natural Heritage Program list. The proposed action would have no known effects on dwarf lousewort.

Special Status Fauna:

There are no known Federally listed Threatened or Endangered wildlife species found within or adjacent to the project area. There are four species found within the project area that have increased monitoring due to population concerns. These species are sage-grouse, northern goshawks, redband trout, and Malheur mottled sculpin. The proposed action will maintain and enhance both sage-grouse and northern goshawk habitat. Direct effects on goshawks would be minimal as nesting and fledging seasons would be avoided. The proposed action may have minor detrimental short-term impacts on redband trout and Malheur mottled sculpin through increased sedimentation. However, the proposed action would facilitate the recovery of riparian hardwood species and reduce the chances of a stand replacement fire thus ensuring stable upslope soil conditions and a continual supply of large woody debris to the stream channel to maintain diverse and complex fish habitat.

Noxious Weeds:

There would be minimal increases in the risk of introduction of new weed populations or the expansion of existing weed populations as a result of implementing the proposed action. Monitoring for noxious weeds would occur and any weeds attempting to establish a population would be treated.

Cultural Heritage:

Cultural surveys will be completed prior to any implementation of the proposed action. The proposed action would have no known impacts on cultural heritage as cultural sites will be protected throughout the life of the project, either through project design features or total avoidance.

Soils:

Minor increases in soil erosion could occur the first couple of years after the project is implemented. Increases in surface erosion would be short-lived and would likely decrease thereafter as understory vegetation regenerates.

Vegetation:

Under the proposed action existing vegetation would likely be enhanced. Overall species diversity would increase. Forest health and vigor of the stands would be enhanced. Understory forbs, grasses, shrubs, and riparian vegetation would likely reestablish and increase to a more historic level. Underburning would remove much of the aboveground portions of understory vegetation. However, most plants present in the existing plant communities are adapted to periodic fire and have the capability to respond positively to the disturbance.

Wildlife:

Overall, there is likely to be an increase in wildlife species diversity as a result of implementing the proposed action. Species utilizing more open habitats would be favored as a result of the proposed action. Species favoring juniper woodlands and dense conifer stands would be negatively impacted by the proposed action. Foraging opportunities for big game and other herbivores would increase as understory grasses, forbs, and shrubs reestablish. The proposed action will likely increase the health, vigor, and palatability of winter forage for both deer and elk. The plant communities that wildlife rely upon would likely persist in the event of a wildfire. Thermal and hiding cover would decrease as a result of the proposed action, but there would still be more than sufficient thermal and hiding cover in the project area.

Fisheries:

Impacts of the proposed action on fisheries would be the same as those impacts of the proposed action on Special Status aquatic species mentioned above.

Rangeland Management:

There would be no known adverse impacts to rangeland management activities. Some increased forage and palatability would result from the proposed treatments.

Recreation:

Primary recreation activities in the project area are associated with hunting big game, angling on the Silvies River, driving for pleasure, hiking, and wildlife viewing. Under the proposed action there may be brief minimal impacts to recreational activities in the vicinity of the project area. Smoke and noise generated during project implementation could disrupt recreational activities in the spring or fall seasons. In the long term, recreational activities related to driving for pleasure, big game hunting, and wildlife viewing would be enhanced as habitat function improves over time.

Visual Resources:

The project areas are remote and are not visible from any highway. Approximately 50 percent of the project area is classified as a Visual Resource Management (VRM) Class IV. Management direction from the Three Rivers RMP for a VRM Class IV allows for modification of the landscape character. The other 50 percent of the project area is classified as a VRM Class III. Management direction from the Three Rivers RMP for a VRM Class III requires partial retention of the landscape character. The proposed action meets management direction outlined in the Three Rivers RMP for VRM Classes III and IV. Visual resources would be temporarily affected with short-term impacts while treatments are taking place. Upon completion of the project long-term benefits to visual resources should be enhanced as the regeneration of deciduous shrubs and trees take place and overall diversity increases.

Socioeconomics:

There could be positive impacts to local economies as most of the work would be contracted out. There could also be minor positive impacts to local merchants as supplies to implement the project are purchased.

Forestry:

Under the proposed action forest health would be enhanced. Growth and vigor of the retained trees would be enhanced. The risk of disease and insect infestations entering and/or spreading through the stand would decrease as growth and vigor of the stand increases. The risk of a stand replacement wildfire occurring in the stands would be greatly reduced.

Fire Management:

All treatments included in the proposed action would reduce fuel loading and help lessen the negative effects of wildfire. The proposed action would move the Fire Regime Condition Class (FRCC) from a Condition Class 3 (high risk of losing key ecosystem components from fire) to a Condition Class 2 or 1 (a moderate to low risk of losing key ecosystem components from fire). The proposed action would lower the risk of stand replacement fire in the project area. Overall the stand should survive any wildfire event.

Realty:

All land within the project area proposed for treatment is administered by the BLM. The land surrounding the project area is predominately BLM-administered land as well, however, there are several large and small parcels of private land that either border the project area, or are found in the general vicinity. Within the project area, there is one 80-acre parcel of private property.

The proposed action would significantly reduce the risk of intense wildfires occurring with extreme rates of spread on the project area. Consequently, the proposed action would reduce the risk of fire entering the private property by way of land administered by the BLM. The private property within the project area and in the general vicinity would have some minor short-term negative effects as a result of implementing the proposed action. The private property in the general vicinity of the project area is likely to experience short-term smoke inundations. The smoke would dissipate within a few days of burning.

_____Signature on file_____ _____8/6/2004_____
Joan M. Suther Date
Three Rivers Resource Area Field Manager

DECISION RECORD:

Decision: Having considered a range of alternatives and associated impacts within the analysis of the Lake Creek/Boone Canyon Forest Restoration EA, it is my decision to implement the proposed action. The proposed action establishes criteria and objectives to:

- Increase human safety, and reduce the risk of fire entering adjacent private land.
- Reduce hazardous fuels and the risk of stand replacement fires.
- Protect areas of high resource value from stand replacing wildfires, insects, and disease.
- Reduce overstocked conifer stands to improve forest health by increasing the growth and vigor of retained trees.
- Maintain or enhance important habitats such as aspen, mountain mahogany, mountain big sagebrush/bunchgrasses, and bitterbrush stands.
- Improve and restore important wildlife habitats for sage-grouse, migratory birds, and large mammals.
- Begin reintroducing fire into the area to restore and maintain fire-dependent plant communities.
- Increase the cover and density of sagebrush, grass, forbs, and riparian vegetation.
- Enhance and protect the integrity of watershed functions, improve watershed stability and decrease soil erosion.

Rationale: I have selected the proposed action for the reasons stated above and the following:

The proposed action reduces ladder and surface fuel loading, which will reduce fire behavior and intensity, thus increasing human safety and reducing the risk of stand replacing fires. It also reduces the risk of fire entering adjacent private land. This action provides conditions which would exist under a historical fire regime, which allowed these unique stands to adapt to periodic wildfire.

It removes encroaching vegetation, thus protecting and enhancing important plant communities. It also thins overstocked timber stands, which improves forest health by increasing growth and vigor of retained trees, helps protect the stands from insects and diseases, and stimulates growth of grasses, forbs, and shrubs.

It improves landscape diversity.

Public involvement consisted of direct mailing to 20 individuals, organizations, tribes, agencies, a notice in the local newspaper, and a series of six public meetings.

It is in conformance with Section 7(a)1 of the Endangered Species Act.

It is in compliance with the Three Rivers RMP (1992).

It is in compliance with Federal laws that mandate the management of public land resources (Federal Land Policy and Management Act of 1976).

The decision does not result in any undue or unnecessary environmental degradation.

I have also considered alternatives to the proposed action including:

Alternative 1 - No Action: This alternative proposed that no restoration treatments would take place. Under this alternative no treatments described in the proposed action would be implemented. Management under the no action alternative would continue under the current Three Rivers RMP and all other relevant policy direction. I did not select this alternative because it was not responsive to improving the conditions of the Lake Creek/Boone Canyon project area and lessening the threat of catastrophic wildfire within these unique areas that are identified in the purpose and need of the EA.

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4 and Form 1842-1. If an appeal is filed, your notice must be filed in the Burns District Office, 28910 Hwy 20 West, Hines, Oregon 97738 by September 5, 2004. The appellant has the burden of showing that the decision appealed is in error.

If you wish to file a petition, pursuant to regulation 43 CFR 4.21, for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for stay must accompany your notice of appeal. A petition for stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied.

2. The likelihood of the appellant's success on the merits.

3. The likelihood of immediate and irreparable harm if the stay is not granted.

4. Whether or not the public interest favors granting the stay.

_____Signature on file_____ _____8/4/2004_____
Joan M. Suther Date
Three Rivers Resource Area Field Manager